

# Hyperpigmented macules and streaks

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**Figure 1.** Bizarre streaks and linear erythematous vesicular plaques with hyperpigmentation on the abdomen.

**P**hytophotodermatitis is an ultraviolet-induced contact dermatitis due primarily to plant- (= *phyto*), fruit-, or vegetable-derived photosensitizing compounds such as furocoumarins (psoralens). Two prerequisites must be filled for phytophotodermatitis to occur: 1) the skin must have had contact with a sensitizing phototoxin (allergen), and 2) there must be subsequent exposure to ultraviolet radiation (1). Psoralens may be transferred directly when leaves, rinds, or juice come into contact with the skin or indirectly through person-to-person contact. The majority of these phototoxins are activated by ultraviolet light in the long-wave or ultraviolet A (UVA) spectrum (320–400 nm) (2).

Figures 1 and 2 are examples of “margarita photodermatitis” in 2 different patients (1). While sunbathing at the beach and preparing margaritas, our patients squeezed limes, which left juice on their skin. Juice on the hands is easily spread or even dripped onto distant sites or other people. Lime juice contains furocoumarin, a lipid-soluble 8-methoxypsoralen. After sunbathing (a potent source of UVA), the 8-methoxypsoralen covalently binds to keratinocyte DNA (forming cyclobutane dimers), producing irreversibly damaged DNA (3).

## DISCUSSION

The most common allergens causing phytophotodermatitis belong to the following plant families: Umbelliferae (celery, pars-



**Figure 2.** Linear erythematous vesicular plaques with hyperpigmentation on the arm.

ley, parsnips), Rutaceae (limes, lemons), and Moraceae (figs) (4). Twelve to 36 hours after psoralen contact and subsequent ultraviolet exposure, erythema and vesicle formation begin, and the patient may experience a burning pain. The erythema lasts 3 to 5 days and is replaced by hyperpigmentation, which may be in-

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tense and take months to resolve. Permanent scarring is rare unless secondary infection occurs during the vesicular phase.

Classic presentations of phytophotodermatitis include bizarre and linear erythema, vesicles and bullae, and spots or streaks of hyperpigmentation. Particularly helpful clues to the diagnosis include “drip marks”; irregular, bizarre “sunburns”; and handprint shapes (5). The most commonly involved areas include the dorsa of the hands, wrists, forearms, and lower legs. Several groups are at risk for phytophotodermatitis, including bartenders, farmers, grocers, and college students (6). “Celery burn” is seen most frequently in grocers and is due to the high concentration of psoralens in the green leafy portion of celery (6).

Ingestion of psoralen-containing vegetables in sufficient quantities may, on occasion, also lead to generalized phototoxicity in patients exposed to UVA (7).

### Diagnosis

Phytophotodermatitis is a clinical diagnosis that is suggested by atypical, bizarre, sunburnlike reactions with hyperpigmentation (2). A careful history should include possible contact with any of the common plants listed above. Use of “folk” remedies, such as lemon or lime juice for insect bites, should also be explored (5, 8, 9).

### Differential diagnosis

Phytophotodermatitis can be confused with several other conditions including allergic contact dermatitis, infectious lymphangitis, hematologic/oncologic diseases, fungal infections, erythema multiforme, impetigo, cellulitis, jellyfish envenomation, and arthropod bites (5, 10, 11). Additionally, children may acquire lesions from contact with other people who have juice on their hands. These lesions may be difficult to distinguish from child abuse (2). Interestingly, pseudophytophotodermatitis (in-

distinguishable from phytophotodermatitis) can also be caused by celery infected with a fungus (*Sclerotinia sclerotiorum*). The fungus produces 8-methoxypsoralen as well as other furocoumarins (4).

### Treatment

There is no specific treatment for this condition (2). During the acute phase, cold wet compresses and oral salicylates are given for pain and blistering (6). In addition, potent topical steroids will facilitate the clearing of the erythema and vesicles and possibly reduce subsequent hyperpigmentation, which may be further improved by the use of hydroquinones after the acute phase (5).

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